



AYURVEDIC MANAGEMENT OF JANUSANDHIGATA VATA W.S.R TO OSTEO ARTHRITIS KNEE – A SINGLE CASE STUDY

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ABSTRACT

Janu Sandhigata Vata has similarity with Osteo Arthritis, commonly known as “wear and tear” arthritis. Osteo Arthritis is a degenerative disorder without systemic manifestations and the most common form of joint disease, sparing no age, race or geographic area. Symptomatic disease also increases with advancing age. About 73% of people suffering from Osteo Arthritis are older than 55 years, and 60% are female. Over the last three decades, the prevalent symptomatic Osteo Arthritis cases in India increased 2.66-fold from 23.46 million in 1990 to 62.35 million in 2019. Total Disability Adjusted Life Years (DALY) due to Osteo Arthritis increased from 0.79 million in 1990 to 2.12 million in 2019. The prevalence, incidence and DALYs for Knee Osteo Arthritis are consistently higher in females than males. *Sandhigata Vata* is one such disorder affecting locomotive functions in which movement of joints is restricted due to pain and inflammation. It is the most common form of joint disorders among the elderly and obese persons and a major cause of morbidity and chronic disability. *JanuSandhigata Vata* is a condition, which is characterized by an imbalance in the *Vata dosha* (*Vyana Vata*) and *Kapha dosha* (*Sleshaka sleshma*), leading to knee joint disorders such as pain, stiffness and reduced mobility. This article is focused on a detailed case study of a patient diagnosed with *Janu Sandhigata Vata*, illustrating the application of Ayurvedic principles and therapies in managing the condition.

KEYWORDS: *Janu Sandhigata Vata*, *Janu Vasti*, *Matra Vasti*, Osteo Arthritis of Knee

INTRODUCTION

According to WHO, Osteo Arthritis is the second commonest musculoskeletal problem in the world population (30%) after Low back ache (50%). It is the most common joint condition characterised by loss of articular cartilage and remodelled peri articular bone. *Sushruta* mentioned *Shula* (Pain), *Shotha* (swelling) and *Hanti Sandhigata kriya* (diminution of the movements at the joints involved) as symptoms of *Sandhigata Vata* (Su.Sa.Ni. 1/25-26). *Vagbhata* explained this disease in the same manner as of *Charaka*, but the line of treatment is same as mentioned by *Sushruta* (A.Hri.Ni. 15/14). In *Bhela Samhita*, under the topic of *Asthimajjagata Vata Vyadhi*, a description of *Sandhi Vichyuthi* was mentioned (Bh.Sam.Chi. 24/48-49). *Haritha Samhita* also mentioned the management aspect in relation to *Sandhigata Vata* (H.S. *Thritiya Sthana* 20/69). *Madhavakara* and *Bhavamisra* described that; in *Sandhis*, the *Dusta Vata* causes *Sandhi Shaitilya*, *Sandhi Shula*, *Sphutana*, *Shotha*. (M.N. 22/11) (B.P. *Madhyama Khanda* 256). *Chakradutta* described the management of the disease only, in the *Vata Vyadhi Chikitsa Prakarana* (*Chakradutta*, 22/9 and 22/66-67). In modern medicine, the similar condition of joint is explained as “Osteo Arthritis”. It is a degenerative disorder without systemic manifestations. Osteo Arthritis is the most common form of joint disease, sparing no age, race, or geographic area. Symptomatic disease also increases with age.

The Subjective Parameters taken into consideration for the assessment of the results in the present case study are *JanuSandhi Shotha*, *JanuSandhi Shula*, *Janusandhigraha*, *Sparshasahyata*, *Janusandhi Sphutana* and VAS Score. The Objective Parameters considered during the study are Range of Movements measured by Goniometer, Measurements of the Swelling of both the knee joints and Radiological findings based on the Kellgren and Lawrence Scale.

CASE STUDY

Materials & Methods:

Place of Study: Out-Patient Department of *Kaya Chikitsa*, Dr BRKR Govt. Ayurvedic Medical College & Hospital, Erragadda, Hyderabad. Telangana, India.

Chief Complaints:

60 years aged female patient, XYK visited Dr BRKR Govt. Ayurvedic Medical College & Hospital, Erragadda, Hyderabad with OPD No. 52357 and came to *Kaya Chikitsa* OPD for consultation. Patient complained of severe pain and swelling in both the knee joints for the last 6 months and unable to climb stairs without support/assistance; the condition was as such, where the Orthopaedic surgeon had advised for Total Knee Replacement (TKR) for both the knee joints.

Study Type: Interventional Open labelled Study

History of Present Illness:

A *Vrudhha Avasta Rogi* from a *Sadharana Desha* having *Madhyama Kosta*, *Vata Kaphaja* dominant *Shareera Prakruti* and *Satwa Rajo* dominant *Manasika Prakruti* with *Madhyama Deha Pramana* presented to Dr BRKR Govt. Ayurvedic Medical College & Hospital, Erragadda, Hyderabad, with *Ubhaya Janu Sandhi Shula* and *Janu Sandhi Shotha* for the past 06 months. The *Rogi* complained of *Janu Sandhi Shula* first in the *Dakshina Janu Sandhi* due to *Adhwa Gamana* and gradually noticed *Shula* in the *Vama Janu Sandhi* also; which eventually resulted in *Gamana Asaktata* and *Janu Sandhi Shotha*. She took *Shamana Chikitsa* and *Bahir Parimarjana Chikitsa* (Conservative treatment from other system of Medicine and Physiotherapy), but found no relief in the *Janu Sandhi Shula* and suffered with *Akunchana Prasara Veda* and *Sandhi Sphutana/Atopa*. The *Rogi* presented with the Antalgic and Waddling gait (*Gamana Asaktata*) on examination. On consulting an Orthopaedic surgeon, she was suggested to undergo Total Knee Replacement (TKR) surgery. Later, she consulted the *Vaidya* at Dr BRKR Govt. Ayurvedic Medical College & Hospital, Erragadda, Hyderabad for Ayurvedic management.

History of Past Illness:

No past H/o. DM/CAD/CVA/Trauma/Fracture. No other comorbidities. No past Surgical history.

Family History:

Patient's mother suffered and her elder brother is suffering with severe Osteo Arthritis of both the Knee joints.

Treatment History:

Known H/o. Hypertension since 2 years. Under anti-hypertensive medication, Tab. Telmisartan (Telma 40mg). Underwent Physiotherapy for 1½ months and found instant relief for only few hours after the therapy and did not fetch much in longer duration.

Personal History:

Name: XYK	Marital Status: Married
Age/Gender: 60 years/Female	Occupation: Home-maker
Diet: Mixed	Addictions: Tea/Coffee – once a day
Micturition: Normal	Bowels: Regular

Table No. 1.1 showing the personal history of the patient

A) Vihara

Nature of Work	Vyayama	Abhighata / Injury	Nidra
Moderate Household chores	Irregular	Nil	Samyak

Table No. No. 1.2 showing the personal history – Vihara aspect

B) Agni: Vishamagni

C) Kosta: Madhyama

D) Artava: Attained Menopause 21 years ago, at the age of 39 yrs

E) Manasika Hetu: Chittodwega (stressed due to the loss of

beloved ones)

Nadi	Vata-Kaphaja	Shabda	Prakrutha
Mutra	Samyak/ Prakrutha	Sparsha	Sheeta
Mala	Regular/ Prakrutha	Drik	Prathamapatala Gata Timira (Refractive errors)
Jihwa	Prakrutha	Akriti	Madhyama

Table No. 2 showing the Astha Sthana Pariksha

Prakruthi	Vata-Kaphaja	Satmya	Madhyama
Vikrithi	Madhyama	Satwa	Madhyama
Sara	Mamsa Sara	Ahara Shakti	Madhyama
Samhanana	Madhyama	Vyayama Shakti	Madhyama
Pramana	Ht.: 157cm Wt.: 65kg	Vayah	Jarah (60 yr)

(Source of Prakruthi re-confirmed by Desh Ka Prakruti Parikshan tool)

Table No. 3 showing the Dasha Vidha Pariksha

Consciousness:	Height: 157cm	BP: 130/90 mm of Hg
Conscious		
Pulse Rate: 76/min, Regular	Weight: 65kg	Heart Sounds: S1, S2 + heard
Respiratory Rate: 18/min	BMI: 26.4 kg/m2	Nourishment: Moderately nourished
Temperature: Afebrile	Built: Moderate	Tongue: Normal

Table No. 4 showing the Samanya Pariksha (General Examination) of the patient

Systemic Examination:

- Central Nervous System:** Patient is Conscious, Coherent and Well-Oriented.
- Cardio-Vascular System:** S1, S2 heard. No murmurs or abnormal sounds heard.
- Respiratory System:** Shape and Size of the chest is normal. BAE +.
- Gastro-Intestinal System:** Abdomen is soft. No tenderness/pain.
- Genito-Urinary System:** NAD
- Locomotor System:** Pain +++, Swelling ++, Crepitus ++, Limping gait ++.

Pathological Findings:

Hb%: 13.2 gm/dl	T3: 1.03 ng/mL	S. HDL: 44 mg/dL
HbA1c: 5.7%	T4 : 9.3 µg/mL	S.Bilirubin: 0.5mg/dL
S.Total Cholesterol:186 mg/dl	TSH : 5.32 µIU/mL	CRP : 2.5 mg/L
S. Triglycerides : 144 mg/dL	Vit. B12 : 387 pg/mL	S. Calcium: 8.6 mg/dL

(Source: Telangana Diagnostics at Dr. BRKRGAMC&H)

Table No. 5 showing the Pathological findings

Radiological Findings:

Findings	Left Knee & Right Knee
AP View	Joint space reduced in the medial compartment in the both the knees. Sclerotic changes on articular surfaces of femur and tibia in both the knees. Osteophyte formation. Altered alignment of both knee joint. Sclerosis of tibial spine in both the knees (spiking).
Lateral View	Osteophytes seen on the posterior aspect of right femur. Sclerotic changes seen at the Patello-femoral joint of both the knees.

Table No. 6 showing the Radiological findings

X-Ray shows multiple osteophytes, definite joint space narrowing --- S/o. Grade III Osteo Arthritis Knee (As per Kellgren Lawrence Scale)

On Examination Findings:**A) Darshana (Inspection):**

	Left Knee	Right Knee
Swelling	Present. On the anterior aspect of the knee joint	Present. On the anterior aspect of the knee joint
Deformity	Absent	Absent
Gait	Limping gait. No additional support needed while walking, but need assistance while climbing stairs	
Muscle Spasm	Absent	Absent
Muscle Wasting	Absent	Absent

Table No. 7.1 showing the On-examination findings on Inspection**B) Sparshana (Palpation):**

	Left Knee	Right Knee
Local Temperature	No local rise of temperature	No local rise of temperature
Tenderness	Pain on deep touch +	Pain on deep touch +
Crepitus	Palpable & Audible crepitus ++	Palpable & Audible crepitus ++

Table No. 7.2 showing the On-examination findings on Palpation**C) Prashna (Enquiry):**

Intensity of Pain	Severe, Deep pricking type of pain (VAS – 7)
Side involved	Both – Right and Left Knee joints
Site of pain	Medial and Anterior aspect of right and left knee joints

Table No. 7.3 showing the On-examination findings on Enquiry**Diagnostic Criteria:****Subjective Parameters:**

- Janu Sandhi Shotha
- Janu Sandhi Shula
- Janu Sandhigraha
- Sparshasahyata
- Janu Sandhi Sphutana

• VAS Score

Sl. No.	Subjective Parameters	Grade-0 Absent/ Normal	Grade-1 Mild	Grade-2 Moderate	Grade-3 Severe
1.	Janu Sandhi Shotha	Absent	+	++	+++
2.	Janu Sandhi Shula	Absent	+	++	+++
3.	Janu Sandhigraha	Absent	+	++	+++
4.	Sparshasahyata	Absent	+	++	+++
5.	Janu Sandhi Sphutana	No Crepitus	Palpable	Audible	-
6.	VAS Score	0	1-3	4-6	7-10
7.	Gait	Normal gait	Mild abnormality	Moderate abnormality	Limping gait

(Source: Gradings as per WHO Scoring for Ayurvedic Symptoms)

Table No. 8 showing the Gradings of the Subjective Parameters**Objective Parameters:**

- Measurements of the Swelling of both the knee joints
- Range of Movements (ROM) of the Knee joints by Goniometer

Treatment Plan:**Prognosis:**

As the patient in the present study is in *Vridhha Avastha*, the disease being *Vata Vyadhi* and existing as *Madhyama RogaMargagata Vyadhi*, contributes its *Sadhya ASadhyata* (prognosis) to be *Krchhra Sadhya*. Hence, in order to handle the degenerative changes due to vitiated *Doshas* ie., due to *Vata* *Vruddhi* and *Kapha Kshaya*; the patient is treated with *Avarthita Snehas* to get relief from the symptoms. In the treatment period of 30 days, the dependency nature of the patient had reduced significantly and is still under treatment for further improvement in her condition.

Patient was treated following the below treatment protocol –

A. Shamana Aushadhis:

1. Tab. *Lakshadi guggulu* 500mg BID after food with water
2. Cap. *Zeotone* plus 2caps at 7AM and 5PM - ½ an hour before food with warm water
3. Tab. *Ostikot* 1 BID after food with water

B. Bahir Parimarjana Chikitsa:

1. *Abhyanga* of both *Janu Sandhi* with followed by
2. *Janu Vasti* with *MashaMasha Tailam* and *Maha Vishagarbha Tailam* in the ratio of 3:1 for 07 days
3. *Churna Pinda Sweda* with *KolaKuluthadi Churnam* and *Kottamchukkadi Churnam* for 07 days.
4. *Shirodhara* with *Balaswagandhadi Tailam* and *Brahmi Tailam* in the ratio of 3:1 for 07 days.
5. *Janu Pichu* with *Balaswagandhadi Tailam* for 07 days.

C. Sodhana Chikitsa:

1. *Matra Vasti* with *Balaswagandhadi Tailam* (60ml) and

Pravala Bhasma (1gm) for 07 days.

Day	Date	Dravya	Time of Administration	Time of Evacuation	Vasti Retention Time	Re-marks
1	22/10/24	<i>Balaswagandhadi Tailam + Pravala Bhasma</i>	11:20 AM	12:45 PM	1hr 25min	Nil
2	23/10/24		10:15 AM	12:40 PM	2 hr 25 min	Nil
3	24/10/24		10:20 AM	03:20 PM	5 hr	Nil
4	25/10/24		10:20 AM	10:45 AM	25 min	Nil
5	26/10/24		10:20 AM	12:40 PM	2 hr 20 min	Nil
6	28/10/24		10:20 AM	12:25 PM	2 hr 05 min	Nil
7	29/10/24		10:20 AM	01:20 PM	3 hr	Nil

Table No. 9 showing the Matra Vasti Schedule

Pathya: *Ushna Jala Sevana, Godugdha, Madhura Amla Lavana Ahara Sevana*, carbohydrates and omega-3 unsaturated polysaccharides, fibre rich diet, fruits and vegetables.

Apathya: *Yava, Sheeta Jala, Nava Madya, Sushka Mamsa Sevana, Chinta, Diva Swapna, Ratri Jagarana, Anashana, Chankramana, Yana Gamana, Vega Dharana.*

Treatment Period: For a period of 30 days.

Date of Treatment commencement: 14/10/2024

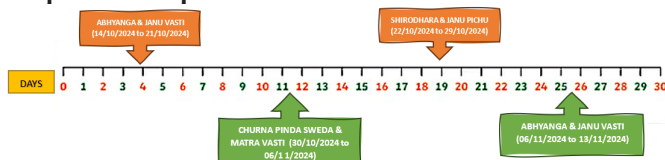
Date of Treatment conclusion: 13/11/2024

Treatment Protocol:

1.	A. <i>Janu Vasti</i> with <i>Mahamasha Tailam + Maha Vishagarbha Tailam</i> (3:1) preceded by Local <i>Abhyanga</i> for both the <i>Janu Sandhis</i> for 7 days (14/10/24 to 21/10/24)
2.	B. <i>Churna Pinda Sweda</i> with <i>Kolakuluthadi Churnam + Kottamchukkadi Churnam</i> for 07 days C. <i>Matra Vasti</i> with <i>Balaswagandhadi Tailam</i> (60ml) + <i>Pravala Bhasma</i> (1gm) for 07 days (22/10/24 to 29/10/24)
3.	D. <i>Shirodhara</i> with <i>Balaswagandhadi Tailam + Brahmi Tailam</i> (3:1) for 07 days E. <i>Janu Pichu</i> with <i>Balaswagandhadi Tailam</i> for 07 days (30/10/24 to 06/11/24)
4.	F. <i>Janu Vasti</i> with <i>Mahamasha Tailam + Maha Vishagarbha Tailam</i> (3:1) for 7 days (06/11/24 to 13/11/24)

Table No. 10 showing the Treatment Protocol

Graphical Interpretation Of The Treatment Protocol:



Treatment Procedures:

A. *ABHYANGA* for both the *Janu Sandhis*

1. Procedure done

Abhyanga, a gentle massage, on both the *Janu Sandhis* is done using warm medicated *Mahamasha Tailam* for 15 min, followed by *Janu Vasti* for 7 days. The *Abhyanga* is done in circular manner at both the Knee joints and in *Anuloma* direction on

the legs.

2. Anticipated Outcome

Abhyanga with *Sneha* helps in reducing *Vata* and supports *Kapha*. *Abhyanga* helps in the improvement of venous and lymphatic flow, delivering more oxygen and exchange of nutritive elements to the muscles and tissues. Reduces muscle soreness and pain, improves flexibility and range of motion of the legs and promotes relaxation and reduce stress and anxiety.

B. *Janu Vasti*

1. Procedure done

For *Janu Vasti*, 1kg of black gram flour is taken and on adding sufficient quantity of water, a dough is prepared. Two round pits of 14cm outer circumference, thickness of 3cm and height of 5cm (Fig. a) each are prepared out of the dough. 200ml of *Mahamasha Tailam* and *Maha Vishagarbha Tailam* (in 3:1) is made warm. After ensuring the tolerable temperature, oil is poured inside along the sides of the dough, for the temperature of the oil being 38oC (Fig.b) in each round pit on each *Janu Sandhi*. The temperature of the oil is maintained at 38oC throughout the process, which is carried out for 40-45min daily for a period of 7 days. (*Snehana* and *Swedana*)

2. Anticipated Outcome

Janu Vasti primarily helps in alleviation of *Vata* and supports and nourishes *Kapha*. Due to *Janu Vasti*, both *Bahya Snehana* and *Swedana* takes place on the *Janu Sandhi*. Local increase in temperature results in local increase of circulation due to the dilatation of the capillaries at terminal region resulting in contraction of internal vessels. Thereby, blood is drawn towards periphery finally promoting phagocytosis and also combating inflammatory process. Drainage of excessive fluid through lymphatics also takes place.



Fig. A



Fig. B

C. Churna Pinda Sweda

1. Procedure done

Churna Pinda Sweda is done by using *KolaKuluthadi Churnam* and *Kottamchukkadi Churnam* each 200gm. The powder is fried in the vessel till it attains a golden-brown colour. It is divided into 2 equal parts and tied into 2 Pottalies. The Pottalies are made of cloth measuring 50cm x 50cm (Fig. c) each with 200gm of above mixed powders in each of the Pottali. The hot Pottali is gently applied over the body, after confirming the temperature by applying the Pottali on the dorsum of the hand; here the temperature of the powder was 41.60C. The Pottali is applied by pressing over the *Janu Sandhi*, followed by the kneading and massaging. Both Pottalies are used alternately after reheating to maintain uniform temperature throughout the procedure, which was carried for 40-45min daily for a period of 7 days.

2. Anticipated Outcome

Churna Pinda Sweda is highly effective in reducing swelling and pain. Helps in deep muscle relaxation, relieving pain, stiffness and inflammation in the joints and muscles. This therapy also helps in improving the health of the joints, especially in cases of degenerative joint conditions, by promoting better lubrication and reducing stiffness by the application of heat locally. This therapy is useful in pacifying both *Vata* (for pain and stiffness) and *Kapha* (for excess moisture and congestion), making it ideal for conditions with both joint pain and fluid retention. Also improves the strength and flexibility of muscles and joints.



Fig. C

D. Matra Vasti

1. Procedure done

Matra Vasti is given using 60ml of *Balaswagandhadi Tailam* and 1gm of *Pravala Bhasma*. The *Tailam* is heated to lukewarm and 1gm of *Pravala Bhasma* is added to it. *Vasti Yantra* is used to perform the process, making the patient lie in left lateral position and right leg flexed. After ensuring relaxation of the sphincters, *Matra Vasti* has been given. After the *Vasti*, patient was asked to lie on her back. Legs were flexed and extended five times and light massage is done over the abdomen and feet.

2. Anticipated Outcome

Matra Vasti promotes strength, causes easy elimination of faeces and urine, nourishes the body and cures *Vata* disorders. It eliminates vitiated *Doshas* along with *Malas* from the body. It acts as *Shodana*, *Shamana*, *Bruhmana*, *Vatahara* and *Balyakara*. Here, in this condition, *Matra Vasti* helps in reducing inflammation and lubricates joints, easing pain. Enhances flexibility by balancing *Vata Dosha*. Nourishes joints and tissues and induces relaxation.

E. Shirodhara

1. Procedure done

Shirodhara is done using *Balaswagandhadi Tailam*, *Brahmi Tailam* and *Tila Tailam*. Patient is made to lie in a supine position on the *Droni* and *Shirodhara* device is placed near her head. Oil is heated at 40.80C (Fig. d) and poured into the *Dharapatra*. A continuous stream of oil is allowed to fall on the entire forehead, while oscillating the *Dharapatra* to cover the entire head. The oil is being recollected from the *Droni*, reheated and poured back into the *Dharapatra*. This procedure is done for 45 min daily for 7 days.

2. Anticipated Outcome

Shirodhara calms the nervous system and promotes relaxation, reducing stress and anxiety. Balances the body's natural sleep rhythms, leading to better quality sleep and reducing insomnia. Enhances concentration, memory and overall mental clarity by calming the mind and improving blood circulation to the brain. Nourishes scalp, strengthen hair roots and improve skin tone and texture. Here, in this case, *Shirodhara* is done to enhance the threshold of the patient to tolerate the pain and simultaneously enhance both physical and psychological well-being.



Fig. D

F. Janu Pichu

1. Procedure

Two cotton pieces of size 13 X 20 cm each were taken in a wide plate. 100ml of *Balaswagandhadi Tailam* is poured into the plate and heated up to 38°C (Fig. e). Then, the cotton pieces are dipped into the heated oil and placed at both the *Janu Sandhis* and kept for 30min. Oil is reheated and poured on the cotton pieces repeatedly to maintain uniform temperature throughout the process. This was done for 7 days.

2. Anticipated Outcome

Janu Pichu is designed to provide relief from all kinds of knee problems – Osteoarthritis, sprains, knee injury, ligament tear injury, age-related degeneration and sport injuries. In this condition, the purpose of *Janu Pichu* is to enhance local absorption of the warm medicated oil at the *Janu Sandhis* facilitating lubrication of the joints. Easing the pain and strengthening the surrounding muscles.

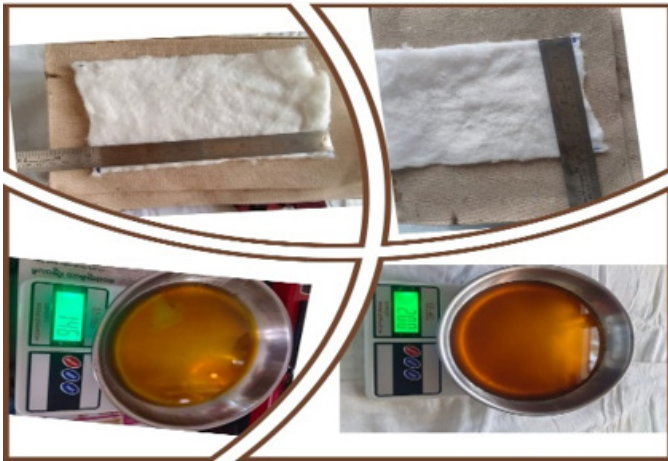


Fig. E

Findings During The Treatment Period:

Date	Day of Rx	Right Knee			Left Knee		
		Above the knee joint	Around the Patella	Below the knee joint	Above the knee joint	Around the Patella	Below the knee joint
15/10/24	2	43cm	36cm	38cm	45cm	35cm	38cm
22/10/24	8	45cm	34cm	36cm	44.5	35cm	37cm
30/10/24	15	43.5	36cm	36.5	43cm	35cm	36cm
07/11/24	23	43cm	36cm	35cm	42.5	36cm	36.5
12/11/24	28	42cm	35.5	34.5	43cm	35.5	35.5

Table No. 11.1 showing the findings of Measurements (in cms) during the treatment

Date	Day of Rx	Right Knee		Left Knee	
		Extension	Flexion	Extension	Flexion
15/10/24	2	174°	75°	180°	65°
22/10/24	8	180°	65°	180°	65°
30/10/24	15	180°	50°	180°	55°
07/11/24	23	180°	50°	180°	45°

12/11/24	28	180°	50°	180°	35°
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Table No. 11.2 showing the findings of Range of Movements using Goniometer

Observations & Results:

Sl.No.	Parameters	Before Treatment	After Treatment
1.	<i>Janu Sandhi Shota</i>	Grade-3	Grade-1
2.	<i>Janu Sandhi Shula</i>	Grade-5	Grade-2
3.	<i>Janu Sandhigraha</i>	Grade-0	Grade-0
4.	<i>Sparshasahyata</i>	Grade-0	Grade-0
5.	<i>Janu Sandhi Sphutana</i>	Grade-2	Grade-1
6.	VAS Score	Grade-7	Grade-2

Table No. 12.1 showing the Subjective Parameters' gradings – before and after treatment

The Classical gradings for the symptoms of *Janu Sandhi Shula*, *Janu Sandhi Shotha*, *Janu Sandhi Sphutana* for the assessment of the results, before and after the treatment, were taken as per the WHO Scoring for Ayurvedic symptoms and there is marked relief in the symptoms.

	Objective Parameter	Right Knee			Left Knee		
		Above the joint	Around the patella	Below the knee joint	Above the joint	Around the patella	Below the knee joint
Before Treatment	Measurements of the Knee joint Swelling (in cms)	43cm	36cm	38 cm	45cm	35cm	38cm
After Treatment		42cm	35.5cm	34.5 cm	43 cm	35.5 cm*	35.5 cm

Table No. 12.2 showing the Objective Parameters viz., Measurements – before and after treatment

Sl.No.	Parameters	Right Knee		Left Knee	
		Before Treatment	After Treatment	Before Treatment	After Treatment
1.	Extension	174o	180o	180o	180o
2.	Flexion	75o	50o	65o	35o

Table No. 12.3 showing the Objective Parameters viz., ROM – before and after treatment

DISCUSSION

The patient was advised *Shamana Aushadhis* and *Panchakarma Chikitsa* including *Bahir Parimarjana Chikitsa* for a period of 1 month. The main ingredients of *Lakshadi Guggulu* are *Laksha* (*Laccifer lacca*), *Asthisamharaka* (*Cissus quadrangularis*), *Guggulu* (*Commiphora mukul*), *Triphala*, *Guduchi* (*Tinospora cordifolia*), *Chitraka* (*Plumbago zeylanica*), *Pippali* (*Piper longum*), etc. The resinous matter of the Lac (*Laksha*) contains aleuritic acid which acts as anti-inflammatory. *Guduchi* contains

Giloin and Beriberin compounds and acts as *Bhagnasandhana*, *Vrishya*, *Rasayana*. *Pippali* has the best *Rasayana* property, which maintains the synovial membrane and has the properties of antioxidant and anti-inflammatory actions. It works as a counter-irritant and analgesic when applied locally for muscular pains and inflammations. *Chitraka* has Plumbagin, which diminishes the levels of inflammatory factors. *Mahamasha Tailam* has the ingredients of *Masha*, *Balamula*, *Rasna*, *Dasamula*, etc. *Maha Vishagarbha Tailam* contains *Datura*, *Tila Tailam*, *Guda*, *Vacha*, *Maricha*, *Vatsanabhi*, etc. *Balaswagandhadi Tailam* has the ingredients of *Balamula*, *Aragwadha*, *Chandanam*, *Durva*, etc. *Pravala Bhasma* is *Tridoshashamaka*, indicated for *Snayugata Rogas*, which can strengthen the ligaments around the joints and by virtue of calcium content, with properties of *Vatahara*, which is highly useful in degenerative disorders. *Kottamchukkadi Churnam* includes *Kottam* (*Saussurea costus*), *Chukku* (*Zingiber officinalis*), *Sigru* (*Moringa oleifera*), etc. The antioxidant and phenolic content of ginger protect against the free radicals and exhibit anti-inflammatory and antioxidant properties. Ginger has a positive role in reducing joint swelling and pain. *Kolakulathadi Churnam* has the main ingredients as *Kola* (*Ziziphus mauritiana*), *Kulutha* (*Macrotyloma uniflorum*), *Yava* (*Hordium vulgare*), etc. *Kulutha* has *Vatakaphahara* property, which is useful in reducing body fat.

CONCLUSION

Sandhigata Vata is *Madhyama Roga Margagata Vatika* disorder, in which the vitiated *Vata* gets lodged in *Sandhi* (joints). Hence to treat *Sandhigata Vata*, drugs acting on both *Vata* and *Asthi* have been selected. In this particular case, as patient is in *Vridha Avastha*, disease being *Vata Vyadhi* and existing as *Madhyama Roga Margagata Vyadhi*, contributes its *Sadhya Asadhyata* (prognosis) to be *Krichhra Sadhya*. *Janu vasti* with *Mahamasha Tailam* acted both as *Snehana* and *Swedana*, along with the combination of pharmacokinetics of the drugs, it brought better relief in the signs and symptoms of *JanuSandhigata Vata*. *Churna Pinda Sweda Karma* has brought relief by reducing the pain and swelling of the knee joints and there are remarkable changes in the range of movements measured by Goniometer. The ability of the patient in walking distances, climbing stairs and the well-being of the patient has been significantly improved. Within 01 month of treatment, the dependency nature of the patient has reduced and the overall outcome based on the treatment plan was satisfactory and the quality of life of the individual has significantly improved.

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